

Message

From: Jim Lane, The Digest [jlane@biofuelsdigest.ccsend.com]
on behalf of Jim Lane, The Digest [jlane@biofuelsdigest.com]
Sent: 2/17/2020 3:31:46 PM
To: Dunham, Sarah [Dunham.Sarah@epa.gov]
Subject: The honor of your presence is requested

*The organizers of the
Advanced Bioeconomy Leadership Conference
in partnership with the
U.S. Biomass Research & Development Board
request the honor of your presence to attend and participate
in the open public meeting:*

The Bioeconomy Initiative Forum

*on Wednesday the 25th of March,
Two thousand and twenty
Yates Auditorium, U.S. Department of the Interior
in the City of Washington*

*R.S.V.P. By March 23rd
Complimentary admission.
The first 600 registrants will have guaranteed seating.*

2020: Setting the Priorities

Hi Sarah,

On March 25th, from 8am to 12pm, a one-time, special meeting of the leadership of the bioeconomy will take place in Washington, DC. **Admission is open to the public and complimentary**, and it will form the opening session of ABLC 2020. It's the Bioeconomy Initiative Forum, ABLC registrants have automatic registration for the event - seating is limited to the first 600 attending registrants on the day.

The meeting will highlight what?

The purpose of the meeting is to report on progress of the biomass research and development program and to seek input from industry stakeholders, particularly commercial companies on the directions of the program and the future direction and structure of public private partnerships, which are is key part of the Bioeconomy Initiative: Implementation Framework.

How do I register?

If you are attending ABLC 2020, you are already registered. If you are not attending ABLC 2020, you can use this link for a complimentary registration. Seats are limited to the first 600 that register and attend, and we are expecting a full house, so please take a moment to register immediately if you would like to attend. [You can register here.](#)

What is the Bioeconomy Initiative: Implementation Framework?

It is a strategy published by different U.S. federal agencies to accelerate innovative technologies that harness the nation's biomass resources for affordable biofuels, bioproducts, and biopower. The Bioeconomy Initiative: Implementation Framework was developed by the Biomass Research and Development Board (BR&D Board) to guide interagency coordination for such an effort.

The Framework presents goals and actions for:

- Advanced algae systems
- Feedstock genetic improvement, production, management, and logistics
- Biomass conversion and carbon utilization
- Transportation, distribution, infrastructure, and end use
- Bioeconomy analysis
- Bioeconomy sustainability

[You can download the complete Implementation Framework here.](#)

What will be discussed on March 25th?

Strategic, sustained stakeholder engagement - essential to growing the bioeconomy to effectively reduce technology uncertainties and improve supply chain performance. We will discuss how Federal agencies, in collaboration with universities, industry, stakeholders, and non-governmental organizations, will build strong partnerships for technology transfer to the bioeconomy industry.

Performing innovative research and developing enabling platforms and applications - a critical factor to drive an innovation-based bioeconomy. We will discuss new advancements in basic and applied research across the bioenergy and bioproduct supply chain.

Staying at the cutting edge of understanding and assessing potential environmental, social, and economic effects of various technologies and bioeconomy scenarios. We will discuss developing a catalogue of key metrics and indicators, as well as methods and guidance to support their application, to help identify best practices and maximize the benefits of the bioeconomy, while mitigating impacts.

Mitigating risks, through techno-economic and risk assessments - a key priority of the Bioeconomy Initiative. We will explore how understanding and quantifying technology uncertainties and financial risks is pivotal to the success of the bioeconomy.

Who will be on stage with us?

To help frame and spur the discussion, our discussion leaders will include:

Hosts and Opening Remarks

Kathy Benedetto, Sp. Asst. (BLM) to the Sec. of the Interior

Daniel Simmons, DOE Board Co-Chair

Scott Hutchins, USDA Board Co-Chair

Overview of the Bioeconomy Initiative: Implementation Framework

Alison Goss Eng, DOE

Session moderators and voices

Mark Elless, DOE

Tim Cesarek, CCO, Gevo

Chris Clark, EPA

Brian Heninger, EPA

Jeremy Guest, University of Illinois

Devinn Lambert, DOE

Deepti Tanjore, Advanced Biofuels Process Demonstration Unit
Bill Goldner, USDA
John Hannon, COO, Vertimass
Dan Geller, University of Georgia
Ira Levine, University of Southern Maine

What is your role?

The US federal effort is getting organized - cross-cutting agency lines, coordinating on topics, approaches, and outside engagement. A public meeting of this type, at such a moment, comes around rarely. This is your opportunity to help shape that agenda.

It's a stakeholder-engaged forum

This is no dog-and-pony show where attendees sit back in their chairs, listen to remarks, and ask for slides after the end of the panels. Half of the time of this session is reserved for stakeholder discussion - your reaction, your thoughts, your direction.

If you've ever wanted to shape the nature and focus of - measured over a decade - a R&D effort leveraging billions of public and private dollars for the bioeconomy's future, this is the hour, the place, and the event.



Three pre-meeting forums for you to join online

You are also encouraged to join in to one of three pre-event, one-hour, online discussion forums hosted by Digest editor & publisher Jim Lane on February 25th, March 10th and March 17th at 12pm ET. In these discussion forums, we'll introduce more about the Bioeconomy Initiative: Implementation Framework and seek input about your ideas, your comments, about the directions of the program, and the future direction and structure of public private partnerships. In short, we'll be looking and discussing the shape of public/private partnerships for the 2020s and beyond.

By testing out your ideas with others, we'll ready ourselves for a lively, connected, organized and successful event on the day.

You can register (independently) for these pre-meets, here:

Feb 25 online meeting.

Mar 10 online meeting.

Mar 17 online meeting.

Who comprises the Biomass Research & Development Board?

The BR&D Board, as well as the annual BR&D Initiative solicitation and Technical Advisory Committee, were established by the Biomass Research and Development Act of 2000, which was later amended by Section 9001 of the Food Conservation and Energy Act of 2008 (FCEA) and was most recently reauthorized in the Agriculture Improvement Act of 2018. USDA and DOE annually implement the BR&D Initiative, which consists of grants made available through FCEA Section 9008 and other programs. The Technical Advisory Committee is an independent body that provides input to agencies regarding the technical focus and direction of the Initiative.

The Biomass Board

Daniel Simmons (Co-chair), Assistant Secretary for Energy Efficiency and Renewable Energy, Department of Energy

Scott Hutchins (Co-chair), Deputy Under Secretary for Research, Education, and Economics, Department of Agriculture

Deerin Babb-Brott, Acting Lead, Energy and Environment Division, Office of Science and Technology Policy

Sharlene Weatherwax, Associate Director of Science for Biological and Environmental Research, Department of Energy

Al McGartland, Director, National Center for Environmental Economics, Office of Policy, Environmental Protection Agency

Dawn Tilbury, Assistant Director, Directorate for Engineering, National Science Foundation

Kathleen Benedetto, Senior Advisor to the Bureau of Land Management, Department of the Interior

Bette Brand, Administrator for Rural Business Service, Rural Development, Department of Agriculture

William Bray, Deputy Assistant Secretary of the Navy for Research Development Test and Evaluation, Department of the Navy

Board Operations Committee Members

Jonathan Male, Director, Bioenergy Technologies Office, U.S. Department of Energy

Kristen Johnson, Board Operations Committee Liaison, Technology Manager, Bioenergy Technologies Office, U.S. Department of Energy

Gail McLean, Photochemistry and Biochemistry Team Lead, Office of Basic Energy Sciences, U.S. Department of Energy
William Hohenstein, Director, Climate Change Program Office, Acting Director, Offices of Energy Policy and New Uses and Environmental Markets, Office of the Chief Economist, U.S. Department of Agriculture
Mark Brodziski, acting Deputy Administrator, Business Programs, Rural Development, U.S. Department of Agriculture
Wade Salverson, Stewardship Coordinator and Biomass Forester, Bureau of Land Management, U.S. Department of the Interior
Jim Caley, Director of Operational Energy, U.S. Department of the Navy
Shawn Johnson, Senior Advisor, U.S. Department of Transportation
Nathan Brown, Alternative Jet Fuels Project Manager, Federal Aviation Administration
Brian Heninger, Economist, National Center for Environmental Economics, U.S. Environmental Protection Agency
Carole Read, Program Director in the Engineering Directorate, National Science Foundation

The Biomass Research and Development Technical Advisory Committee

Rob Anex, University of Wisconsin, Madison
Brent Bean, United Sorghum Checkoff Program
Jacques Beaudry-Losique, Algenol Biotech LLC
Esteban Chornet, Enerkem
Michael Beardsley, Liberty University
Doug Faulkner (Co-Chair), Leatherstocking, LLC
Jerry Gargulak, Borregaard-Lingotech
Aviva Glaser, National Wildlife Federation
Madhu Khanna, University of Illinois at Urbana-Champaign
Alan Keller, POET
Michael Ladisch, Purdue University
Pete Madden, Edgemere Consulting
Michael McAdams, Advanced Biofuels Association
Shelie Miller, University of Michigan
Manuel García Pérez, Washington State University
Tim Rials, University of Tennessee-Knoxville
Susan Rupp, Enviroscapes Ecological Consulting, LLC
Basudeb Saha, University of Delaware
Patricia Scanlan, Scanlan Environmental LLC
Steve Searcy, Texas A&M University
David Shonnard, Michigan Technological University
Larry Sullivan, The Citadel
Kelly Tiller (Co-Chair), Genera Energy Inc.

Register for ABLC 2020: One heckuva meeting

With 6 weeks until ABLC, more than 600 registrants are already committed and making their ABLC plans - they're ready to advance themselves into leadership in the advanced bioeconomy in 2020. Are you?

And yes, at ABLC, meet the the 50 Hottest Companies in the Advanced Bioeconomy - these are the ones with the fast-growing companies, lists of projects, and forests of partners. More Hot 50 companies go to ABLC than any other event - it's one stop-shopping for meeting and doing business with the sector's hottest firms.

Plus, at ABLC 2020 we'll announce on March 26th at 6pm the inaugural Best Places to Work 2020 rankings. Who's got that optimal combination of compensation, great conditions, empowerment and opportunity?

With more than 600 delegates headed to Washington this March, here's your chance to access all the content, ideas, relationships and perspective, all the benefits at half the cost (if you use our 2 ABLCs for 1 offer)

We're going to ABLC 2020. Are you?

[ABB](#)

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[BSH Home Appliances Corporation](#)

[BTG Bioliquids BV](#)

[Burns & McDonnell](#)

[Butamax Advanced Biofuels LLC](#)

[BZK Sp. z o.o. i Wspólnicy Sp. k.](#)

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[Clariant](#)

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[Crop Enhancement](#)

[D3Max](#)

[DCI-Biolafitte](#)

[Agenda, Speakers, Events, Networking and Registration - click here!](#)

[Dodds & Associates LLC \(LEC\)](#)

[DSM Biobased](#)

[DuPont](#)

[DWH Process Consulting \(LEC\)](#)

[E100 Ethanol Group](#)

[Ecostrat Inc.](#)

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Next Rung Technology
NGF Nature Energy Biogas A/S
Northwest Advanced
Bio-Fuels, LLC
Northwestern
Novozymes
NuSeed
O'Connor & Company
Oak Ridge National Laboratory
Oberon Fuels
Omega Energy
OmniTech International
Orion Energy Partners
Pacific Northwest National Lab
Passmore Group Inc.
Pivot Bio
POET
Praj Industries
Praxair, Inc.
Purdue University
Purissima
Red Rock Biofuels

Renewable Energy Group
Resources for the Future
Sainc Energy
Sandia National Laboratories
Sarnia-Lambton Economic
Partnership
SBI Bioenergy
Shell
Shell Canada Ltd.
SHV Energy
SIBBS
Siemens
Sierra Energy
Smisson-Mathis Energy
Solecta Inc.
Solvay
Spero Renewables
Spruce Capital
Sprucegrove Investment
Management Ltd.
St Joseph Renewable Fuels
Strategic Avalanche

Sun Alliance Corp
Sunshine Energy
Sylvatex
Synthetic Genomics
Taulia
Tecnon OrbiChem
Teich Process Development
ThermoChem Recovery Int'l
University of California - San Diego
U Mass Lowell
UH Hilo
University of Maine
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US Department of Energy
Bioenergy Technologies Office
US Depatment of Energy
US Department of Transportation
US Maritime Administration
USA Biofuels
Velocys
Virent, Inc.
WARF
Warner Advisors
Washington State University
WHL
Wisconsin Energy Institute
Yosemite Clean
Zeton
ZT DOERFLER Consulting



**We're going to ABLC 2020.
Are you?**

The agenda, themes, registration and more - all the links you need

You can learn in depth about the agenda, themes and the first wave of event speakers [here at the ABLC 2020 website](#).

Why now?

No one can do it alone. The opportunities are too vast, there are too many players, too many partnerships to create and consortia to consider. ABLC saves time and money because of its [unparalleled "networking like crazy" environment](#) and because it represents "one stop shopping" for mastering these markets.

Over the next weeks, I'll update you on the themes, speakers, companies, technologies, and the many [different events and summits that make up ABLC 2020](#) and I'll look forward to seeing you there as we work to ensure that you have the fastest, most affordable path to success.

Regards,

Jim Lane
Editor & Publisher
The Digest

Ascension Publishing, 200 Ocean Lane Dr. #502, Key Biscayne, FL 33149

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Appointment

From: Dominguez, Alexander [dominguez.alexander@epa.gov]
Sent: 3/6/2018 7:35:20 PM
To: Dominguez, Alexander [dominguez.alexander@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Santiago, Juan [Santiago.Juan@epa.gov]; Harlow, David [harlow.david@epa.gov]
Subject: Delegated to David Harlow and Alex Dominguez: Corn Refiners Association
Attachments: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)
Location: 1332 WJCN + Conference Line **Ex. 6 Personal Privacy (PP)**
Start: 3/6/2018 8:00:00 PM
End: 3/6/2018 9:00:00 PM
Show Time As: Tentative

6

Message

From: Dominguez, Alexander [dominguez.alexander@epa.gov]
Sent: 2/21/2018 3:53:00 PM
To: Kyle Harris [kharris@corn.org]
CC: Keniece Barbee [kbarbee@corn.org]
Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Perfect.

You are confirmed for a 45 minute meeting on Tuesday, March 6 at 3:00 with Mandy Gunasekara.

Directions and procedures to 1200 Pennsylvania Avenue NW:

Metro: If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

Taxi: Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12th Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

Security Procedures: A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. Let the guards know that you were instructed to call 202-564-7404 for a security escort.

Please send me a list of participants and any materials in advance of the meeting. Feel free to contact me should you need any additional information.

Alex Dominguez

Policy Analyst to the Principal Deputy
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Kyle Harris [mailto:kharris@corn.org]
Sent: Wednesday, February 21, 2018 9:39 AM
To: Dominguez, Alexander <dominguez.alexander@epa.gov>
Cc: Keniece Barbee <kbarbee@corn.org>
Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Thanks Alex. Lets go with March 6th at 3:00pm. I will be in touch shortly with a list of attendees

Thanks,

Kyle

Kyle A. Harris

Director, Environmental Affairs/Workplace Safety

Corn Refiners Association

1701 Pennsylvania Avenue, N.W.
Suite 950
Washington, D.C. 20006
Office: 202-534-3501
Cell: 410-924-2629

From: Dominguez, Alexander [<mailto:dominguez.alexander@epa.gov>]

Sent: Wednesday, February 21, 2018 9:36 AM

To: Kyle Harris <kharris@corn.org>

Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Tuesday, March 6th at 3:00 or Friday the 9th at 4:00 would work. I'll put them both on hold now until you are able to confirm.

Alex

From: Kyle Harris [<mailto:kharris@corn.org>]

Sent: Tuesday, February 20, 2018 12:08 PM

To: Dominguez, Alexander <dominguez.alexander@epa.gov>

Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Alex,

Please advise on getting this scheduled with Mandy. Would any of these times work?

March 5th, After 1:30 PM

March 6th Morning, or late afternoon

March 8th, after 2:00PM

March 9th, after 1:30PM

Thanks Much,

Kyle

Kyle A. Harris

Director, Environmental Affairs/Workplace Safety

Corn Refiners Association

1701 Pennsylvania Avenue, N.W.
Suite 950
Washington, D.C. 20006
Office: 202-534-3501
Cell: 410-924-2629

From: Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]
Sent: Tuesday, February 20, 2018 10:58 AM
To: Kyle Harris <kharris@corn.org>; Dominguez, Alexander <dominguez.alexander@epa.gov>
Cc: Keniece Barbee <kbarbee@corn.org>
Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Hi Kyle,

I am adding in Alex Dominguez who can help to get this scheduled for Mandy Gunasekara and advise on the suggested dates/times.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Kyle Harris [<mailto:kharris@corn.org>]
Sent: Tuesday, February 20, 2018 10:49 AM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Cc: Keniece Barbee <kbarbee@corn.org>
Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Hi Emily,

As I work through availability with my Coalition members, I wanted to bounce some dates/times off you that might work in the coming weeks to meet with Mandy, Clint, and/or David. We have met with Mandy before, and are pleased to do so again. We just want to make sure we are meeting with the appropriate politicals in OAR who work on this biomass issue, if that falls to Clint or David at this point in time, we would like to meet with them.

Please advise on availability for:

March 5th, After 1:30 PM
March 6th Morning, or late afternoon
March 8th, after 2:00PM
March 9th, after 1:30PM

Thanks much,

Kyle

Kyle A. Harris
Director, Environmental Affairs/Workplace Safety

Corn Refiners Association
1701 Pennsylvania Avenue, N.W.

Suite 950
Washington, D.C. 20006
Office: 202-534-3501
Cell: 410-924-2629

From: Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]
Sent: Thursday, February 15, 2018 9:09 AM
To: Kyle Harris <kharris@corn.org>
Subject: FW: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Hi Kyle,

Bill Wehrum has reviewed this request and asked that I get in touch with you to arrange a meeting with one of the other members of the OAR IO political team – Mandy Gunasekara, Clint Woods or David Harlow.

If you are interested in meeting with one of the members of the political team, let me know and I can set something up.

Also, if you could provide me with a list of the coalition members who would attend the meeting, it would be appreciated.

Thank you.
Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Kyle Harris [<mailto:kharris@corn.org>]
Sent: Wednesday, February 14, 2018 9:21 AM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Cc: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>; Sands, Jeffrey <sands.jeffrey@epa.gov>; Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Dear Emily,

Thank you for your note responding to our request to meet with Assistant Administrator Wehrum regarding biogenic CO2 regulation. We are certainly willing to meet with Mr. South and Ms. Lie, though we do not understand how they would be in a position to chart a course for resolution of the biogenic CO2 issue. This involves CO2 from fermentation tanks at stationary sources, separate from combustion.

When time permits, we respectfully request that Mr. Wehrum meet with us to discuss this Obama era exercise in regulatory overreach that is stifling development of promising renewable technologies and the rural economy, as explained in our recent letter to Administrator Pruitt (please find attached).

Thank you for your consideration.

Kyle A. Harris, Esq.
Manager, Environmental Affairs/ Workplace Safety
Corn Refiners Association
www.corn.org
1701 Pennsylvania Ave NW
Suite 950, Washington, DC 20006
Office: (202) 534-3501
Cell: (410) 924-2629



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From: Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]
Sent: Tuesday, February 13, 2018 8:24 AM
To: Kyle Harris <kharris@corn.org>
Cc: South, Peter <South.Peter@epa.gov>; Lie, Sharyn <Lie.Sharyn@epa.gov>
Subject: FW: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Hi Kyle,

Bill Wehrum has reviewed your meeting request and asked that the Office of Air Quality and Planning Standards (OAQPS) and Office of Transportation and Air Quality (OTAQ) to take this meeting on his behalf.

I am copying staff from each office on this note so you can coordinate setting up a meeting.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Kyle Harris [<mailto:kharris@corn.org>]
Sent: Thursday, February 01, 2018 3:18 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>

Cc: Dominguez, Alexander <dominguez.alexander@epa.gov>
Subject: Meeting Request with Assistant Administrator Wehrum

Ms. Atkinson,

The Biogenic CO2 Coalition would appreciate the opportunity to meet and brief Mr. Wehrum directly on the regulation of CO2 from the processing of short-cycle herbaceous crops.

I look forward to working with you to get on his calendar in the coming weeks.

Thanks in advance,

Kyle Harris

Kyle A. Harris, Esq.
Manager, Environmental Affairs/ Workplace Safety
Corn Refiners Association
www.corn.org
1701 Pennsylvania Ave NW
Suite 950, Washington, DC 20006
Office: (202) 534-3501
Cell: (410) 924-2629

<image

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<image004.png>

Message

Sent: 6/17/2019 6:37:07 PM
To: Steller, John [Steller.John@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: RE: PSD/biomass - national forest stocks

Hi John,

Looks like they are trying to write a bullet on additionality. Here are a few suggested changes

- As discussed in the April 2018 biomass policy memo, there is no causal link between the direction of national forest carbon stock changes and the atmospheric contribution of CO2 emissions resulting from an entity's biomass consumption.

○

Ex. 5 Deliberative Process (DP)

- As discussed in the April 2018 biomass policy memo, there is no causal link between the direction of national forest carbon stocks changes and the atmospheric contribution of CO2 emissions resulting from an entity's biomass consumption.

○

Ex. 5 Deliberative Process (DP)

From: Steller, John
Sent: Monday, June 17, 2019 2:08 PM
To: Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>
Cc: Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: PSD/biomass - national forest stocks

Bill and Allen,

OAQPS, OGC and us are hoping tomorrow to wrap up a new version of the biomass PSD briefing document for next week's briefing for Bill W. We will share this document with you two/Paul tomorrow for review.

In the meantime, Nora/OGC are pre-briefing Matt Leopold tomorrow largely on the legal elements of the document but which are tied to our technical arguments. Since the full briefing document isn't yet in a place to share for your review

Ex. 5 Deliberative Process (DP)

Please let me know if you have any thoughts/edits. Nora has asked for our feedback by tomorrow morning.

Thanks,
John

- As discussed in the April 2018 biomass policy memo, there is no causal link between national forest carbon stocks and the atmospheric contribution of CO2 emissions resulting from an entity's biomass consumption.

○

Ex. 5 Deliberative Process (DP)

Message

Sent: 6/17/2019 7:39:18 PM
To: Steller, John [Steller.John@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: RE: PSD/biomass - national forest stocks

Hi John,

Looks like they are trying to write a bullet on additionality. Here are a few suggested changes

- As discussed in the April 2018 biomass policy memo, there is no causal link between the direction of national forest carbon stock changes and the atmospheric contribution of CO2 emissions resulting from an entity's biomass consumption.

Ex. 5 Deliberative Process (DP)

From: Steller, John
Sent: Monday, June 17, 2019 2:08 PM
To: Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>
Cc: Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: PSD/biomass - national forest stocks

Bill and Allen,

OAQPS, OGC and us are hoping tomorrow to wrap up a new version of the biomass PSD briefing document for next week's briefing for Bill W. We will share this document with you two/Paul tomorrow for review.

Ex. 5 AC/AWP/DP

Please let me know if you have any thoughts/edits. Nora has asked for our feedback by tomorrow morning.

Thanks,

John

- As discussed in the April 2018 biomass policy memo, there is no causal link between national forest carbon stocks and the atmospheric contribution of CO2 emissions resulting from an entity's biomass consumption.

○

Ex. 5 Deliberative Process (DP)

From: Rafelski, Lauren [Rafelski.Lauren@epa.gov]
Sent: 2/6/2019 3:04:58 PM
To: Rafelski, Lauren [Rafelski.Lauren@epa.gov]; Galperin, Diana [Galperin.Diana@epa.gov]; Jackman, Dana [jackman.dana@epa.gov]; Jamison, Frankie [Jamison.Frankie@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Maynard, Rachel [maynard.rachel@epa.gov]; Ramig, Christopher [Ramig.Christopher@epa.gov]; Shell, Michael [Shell.Michael@epa.gov]; Sobel, Aaron [Sobel.Aaron@epa.gov]; Tanner, Dan (Daniel) [Tanner.Daniel01@epa.gov]; Shelby, Michael [Shelby.Michael@epa.gov]; Cole, Jefferson [Cole.Jefferson@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Camobreco, Vincent [Camobreco.Vincent@epa.gov]; Ohrel, Sara [Ohrel.Sara@epa.gov]; Steller, John [Steller.John@epa.gov]; Clark, Christopher [Clark.Christopher@epa.gov]; Levy, Aaron [Levy.Aaron@epa.gov]
CC: Wirth, Tom [Wirth.Tom@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
Subject: WRI presentation on forest GHG emissions
Location: DCRoomARN6500PolyPCTB/DC-ARN-OAR
Start: 2/26/2019 7:00:00 PM
End: 2/26/2019 8:00:00 PM
Show Time As: Busy

Nancy Harris and David Gibbs from WRI will be coming in to talk about their work on forest GHG emissions, and GHG impacts of biofuel crops. Abstracts are below.

Nancy Harris and David Gibbs, Global Forest Watch, World Resources Institute

Mapping global forest greenhouse gas emissions and removals from 2001 to 2015

Greenhouse gas (GHG) emissions from land use, land-use change and forestry (LULUCF) account for approximately 12% of global emissions. At the same time, established and re-growing forests absorb one-third of annual fossil fuel emissions, with the potential to absorb more. Understanding where and when these emissions and removals are occurring can help governments around the world develop forest policies that contribute to the climate change mitigation goals of the Paris Agreement. However, uncertainty surrounding forest-related GHG fluxes is larger than for other sectors, thus complicating policy development and the monitoring of progress towards global, regional, and national goals. While individual countries report their forest-related emissions and removals to the United Nations Framework Convention on Climate Change (UNFCCC) using semi-standardized methods and reporting frameworks, national forest monitoring systems are not entirely comparable to each other, fully transparent, or spatially resolved. Furthermore, both the quality and frequency of national monitoring and reporting vary considerably across countries, resulting in a lack of a globally consistent, spatially and temporally explicit time series of forest-related GHG fluxes. To help address this, we are comprehensively mapping gross and net GHG fluxes across the world's 4 billion hectares of forest land between 2001 and 2015 using data sources independent of countries' estimates and derived from both satellite and ground observations. For annual emissions, we combine maps of annual tree cover loss, drivers of tree cover loss, and aboveground biomass, among other data. For annual carbon removals, we combine maps of recent disturbance history with databases on forest growth rates, among other data. Our preliminary results are that forests were a sink of 3.3 Pg C/yr. (12.1 Gt CO₂/yr.) globally on average between 2001 and 2015, which is consistent with other studies. Our model complements GHG flux estimates reported in national inventories and is relevant across a wider range of spatial scales. To increase use, output maps will be made available on the World Resources Institute's Global Forest Watch website.

Estimating the land use and GHG impacts of biofuel crops under the EU's Renewable Energy Directive 2 (RED2)

Biofuel expansion can lead to significant land use change and associated GHG emissions. Under the recast of the European Union's Renewable Energy Directive of 2009, the EU increased its renewable energy target from 27 percent by 2020 to 32 percent by 2030. Under this new Directive (RED2), information is needed about areas onto which different biofuel crops expanded since the year 2008. Using the best available science and a globally consistent approach, we

approximated deforestation and GHG emissions associated with the expansion of all biofuel-relevant crops since 2008. Relevant crops included oil palm, coconut, wheat, rapeseed, maize, soybean, sugar beet, sunflower and sugar cane. Results showed that most deforestation occurring within biofuel crop production areas was associated with oil palm.

Appointment

From: Critchfield, James [Critchfield.James@epa.gov]
Sent: 5/2/2018 1:46:03 PM
To: Critchfield, James [Critchfield.James@epa.gov]; Steller, John [Steller.John@epa.gov]; Ohrel, Sara [Ohrel.Sara@epa.gov]; Sherry, Christopher [Sherry.Chris@epa.gov]; Clouse, Matt [Clouse.Matt@epa.gov]; Naik-Dhungel, Neeharika [Naik-Dhungel.Neeharika@epa.gov]; Kent, Christopher [Kent.Christopher@epa.gov]; McNeil, Gary [McNeil.Gary@epa.gov]; Edelman, Risa [edelman.risa@epa.gov]
CC: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: FW: Biomass Policy Statement Discussion for CPPD/ESIB
Location: DCRoomWJCE5140OAPT/DC-OAR-OAP (DCRoomWJCE5140OAPT@epa.gov)
Start: 5/4/2018 5:00:00 PM
End: 5/4/2018 6:00:00 PM
Show Time As: Busy

-----Original Appointment-----

From: Critchfield, James
Sent: Friday, April 27, 2018 2:09 PM
To: Critchfield, James; Steller, John; Ohrel, Sara; Sherry, Christopher; Clouse, Matt; Naik-Dhungel, Neeharika; Kent, Christopher; McNeil, Gary; Edelman, Risa
Cc: Irving, Bill
Subject: Biomass Policy Statement Discussion for CPPD/ESIB
When: Friday, May 04, 2018 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: DCRoomWJCE5140OAPT/DC-OAR-OAP (DCRoomWJCE5140OAPT@epa.gov)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 2/13/2018 9:57:15 PM
Subject: Meeting: Pulp & Paperworkers' Resource Committee
Attachments: PPRC Position Paper on HHWQC.PDF; PPRC Position Paper on Carbon Neutrality.pdf; PPRC Meeting Request Wehrum 1-24-18.pdf
Location: 5415 WJCN + Conference Line: [Ex. 6 Personal Privacy (PP)] Conference ID: [Ex. 6 Personal Privacy (PP)]
Start: 2/14/2018 1:30:00 PM
End: 2/14/2018 2:15:00 PM
Show Time As: Busy

To: Dominguez, Alexander; David Harlow; Santiago, Juan; Gunning, Paul; Irving, Bill; Wood, Anna;

Conference Line: [Ex. 6 Personal Privacy (PP)]

Conference ID: [Ex. 6 Personal Privacy (PP)]

Mandy will open the line

Outside Attendees:

Dean Rudolf – PPRC National Vice Chairman – Camas, WA (Georgia-Pacific)

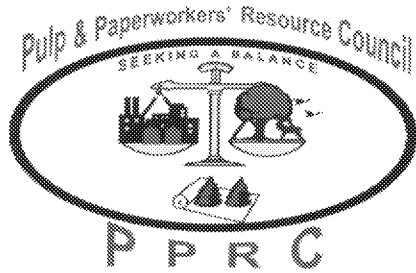
Jim Arnold – PPRC Northeast Region Director – Spring Grove, PA
(Glatfelter)

Rodney Rowser – PPRC Southeast Region – Demopolis, AL (WestRock Company)

Mike Mauldin – PPRC Special Projects Coordinator At-Large – Palatka, FL
(Georgia-Pacific)

Laura Pickard – AF&PA, Manager, PAC & Grassroots

PULP & PAPERWORKERS' RESOURCE COUNCIL



Representing members of: USW, AWPPW,
IAM, IBEW, IBT, UBC, Firemen & Oilers
and Forest Products Industry Workers
www.pprc.info

January 24, 2018

William Wehrum
Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Assistant Administrator Wehrum:

Representatives of the Pulp and Paperworkers' Resource Council (PPRC) are visiting Washington, DC Tuesday, February 13th, through Thursday, February 15th, 2018. We would be pleased if a group of our members could meet with you and your staff to discuss a number of pressing issues, including the carbon neutrality of biomass, air permit streamlining, and Boiler MACT.

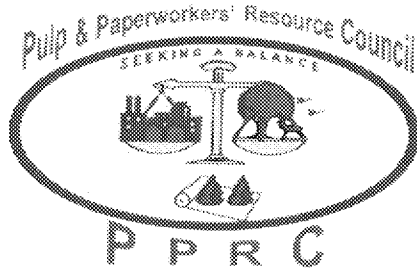
The PPRC is a non-profit grassroots organization made up of ground floor hourly union workers in the forest products industries. We come from all across the United States. The PPRC is committed to educating our legislators and policy makers on issues of importance to the Forest Products Industry and the impact policies have on our jobs and the economies of the cities and small rural communities where our industries are located.

We would appreciate an opportunity to meet and discuss issues of concern with you and/or members of your staff. We will follow up with your office soon, but if you have any questions, please feel free to contact me. Thank you for your consideration.

Regards,

David M. Wise

Pulp and Paperworkers' Resource Council
National Steering Committee Chairman
Southeast Region Director
WestRock
Florence Mill
Florence, SC 29505
david.wise@westrock.com
(843)269-0164



PPRC Position Paper on Carbon Neutrality of Biomass

The forest products industry relies on trees to make our products and uses biomass residuals to power our facilities and supply electricity to the grid. Although the EPA has indicated that wood-derived by-products used to power forest products mills such as spent pulping liquor, slash, and wood waste are carbon neutral. The forest products manufacturing industry needs greater certainty that the EPA will exempt biogenic CO₂ from regulation.

- Trees absorb CO₂, a principle greenhouse gas, as they grow. This removes it from the atmosphere and releases oxygen in its place.
- CO₂ is sequestered during the life of the tree and beyond in many products made from trees.
- Trees complete their carbon cycle when they die, decay or combust, releasing absorbed and sequestered CO₂. Carbon stored as biomass in trees will eventually be returned to the atmosphere whether it biodegrades or is burned for energy. However, sustainably-managed forests will continue to absorb CO₂.
- When coupled with long-term carbon storage in wood products, the forest-to-products cycle remains a net carbon sink.
- The forest products industry sustainably uses all parts of the tree, not only to manufacture products such as paper, packaging, lumber, and plywood, but also to create the energy needed to do so — from the biomass residuals that cannot be used for higher-value products.
- Approximately two-thirds of energy that paper mills use is carbon-neutral bioenergy from forest products manufacturing residuals. This captures energy value from materials that otherwise would go to waste and create greenhouse gases such as methane. Methane gas is roughly 25 times more harmful to the environment than CO₂.
- The use of biomass residuals and the continuing planting of trees have produced a sustainable industry which has seen net increases in forest stocks over the last 50 years.
- Around the world, the carbon neutrality of forest products manufacturing residuals has been recognized repeatedly by studies, agencies and legislation, including guidance from the U.N. Intergovernmental Panel on Climate Change.

The PPRC calls on the EPA, USDA, and DOE to deregulate biogenic CO₂ emissions.

The PPRC is a grassroots organization representing the interests of the nation's pulp, paper, solid wood products, and other natural resource-based workers. The U.S. forest products industry is vitally important to our nation's economy, employing 900,000 people. We rank among the top 10 manufacturers in 45 states and represents 4% of the total Gross Domestic Products (GDP). We are people dedicated to conserving the environment while taking into account the economic stability of the workforce and surrounding community. 2/9/18



PPRC Position Paper on HHWQC

At the national and state level, the EPA has been imposing policies that will make Human Health Water Quality Criteria (HHWQC) more stringent, leading to more impaired waters listings, Total Maximum (Fish Consumption) Daily Loads, and costly unattainable permit limits.

- New national policies that promote tribal treaty rights in environmental protection have led the EPA to pressure states to calculate their HHWQC on unrealistic assumptions, such as a Fish Consumption Rate (FCR) as high as 286 grams/day in the state of Maine.
- The EPA has pressed Northwestern states and Maine to adopt these new policies, and could apply them to any state with a recognized tribe with a treaty that the EPA believes triggers this new policy. There are more than 40 states in the U.S. with tribes that have treaties.
- The new limits that the EPA is imposing will have no significant additional human health protection.
- The EPA recently informed Idaho that it was inclined to disapprove the HHWQC they had submitted for approval and pressured them to adopt unnecessarily stringent standards.
- In 2013, a coalition of Washington stakeholders issued a study that found if the Oregon standards (which are less strict than the EPA's proposal for Washington) were applied to Washington, industries and municipalities would not be able to meet the resulting Clean Water Act permit limits.
- In comparison to the EPA's proposal for Washington, a more reasonable approach (that the EPA had previously rejected) would cost billions of dollars less and would result in no measurable increase in cancer risk.
- The potential cost would be in the billions of dollars to obtain the necessary permits.
- The EPA issued last minute guidance for states on conducting fish consumption surveys to capture the "unsuppressed" fish consumption rate—an approach that makes compliance with the resulting HHWQC and permit limits much more expensive or impossible.

- The EPA pressured Florida to change its HHWQC, based on other portions of the equation to derive HHWQC.
- This past December, the EPA informed Maine's District Court regarding their states proposed HHWQC, that the agency was not changing its position, despite undertaking a reconsideration of its initial approach.

The PPRC feels that the EPA has overstepped its authority and should withdraw the federal rules it imposed on Washington and Maine, as well as its survey guidance, and should approve Idaho and Florida's HHWQC. We also support individual states setting their own water quality standards.

The PPRC is a grassroots organization representing the interests of the nation's pulp, paper, solid wood products, and other natural resource-based workers. The U.S. forest products industry is vitally important to our nation's economy, employing 900,000 people. We rank among the top 10 manufacturers in 45 states and represents 4% of the total Gross Domestic Products (GDP). We are people dedicated to conserving the environment while taking into account the economic stability of the workforce and surrounding community.

2/10/18

Appointment

From: Baker, Justin [justinbaker@rti.org]
Sent: 9/14/2017 3:49:51 PM
To: Baker, Justin [justinbaker@rti.org]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Cai, Yongxia [ycai@rti.org]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]; Jeffrey Petrusa [jpetrusa@rti.org]
Subject: biomass modeling/analysis
Location: BlueJeans info provided below
Start: 9/20/2017 6:00:00 PM
End: 9/20/2017 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

Setting up this meeting to catch up on recent bioenergy-related work, follow-up on SAB meeting, and discuss next steps (including possible discounting paper).

We'll set up a BlueJeans line in case we want to screen share any material.

Justin

To join the meeting on a computer or mobile phone: **Ex. 6 Personal Privacy (PP)**

Connecting directly from a room system?

1) **Ex. 6 Personal Privacy (PP)**
2)

Just want to dial in on your phone?

1) **Ex. 6 Personal Privacy (PP)** BlueJeans U.S. Toll)
(US Toll Free)
(<http://bluejeans.com/numbers>)
2) Enter Meeting ID: **Ex. 6 Personal Privacy (PP)**
3) Press #

Want to test your video connection?

<http://bluejeans.com/111>

Message

From: Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
Sent: 6/3/2020 8:08:18 PM
To: Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
Subject: FW: Biogenic Factors Analysis

FYI — no response from Alex yet

From: Kocchi, Suzanne
Sent: Wednesday, June 03, 2020 3:14 PM
To: Dominguez, Alexander <dominguez.alexander@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Cc: Harlow, David <harlow.david@epa.gov>
Subject: RE: Biogenic Factors Analysis

Hi Alex — Mike and I talked with the team and here's where things stand/what Anne could tell the Administrator. Let us know if you have any questions. Thanks — Suzie

Ex. 5 Deliberative Process (DP)

From: Dominguez, Alexander <dominguez.alexander@epa.gov>
Sent: Wednesday, June 03, 2020 12:33 PM
To: Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Cc: Harlow, David <harlow.david@epa.gov>
Subject: Biogenic Factors Analysis

Suzie/Mike — During tomorrow's check-in with the Administrator Anne would like to provide him an update on where things stand with biogenic nprm

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Bartuska, Ann [Bartuska@rff.org]
Sent: 12/6/2019 2:20:26 PM
To: Burtraw, Dallas [Burtraw@rff.org]; dtenny@nafoalliance.org; francisco.aguilar@slu.se; robert.bonnie@duke.edu; sprisley@ncasi.org; leungj@c2es.org; chris.fife@weyerhaeuser.com; Fawcett, Allen [Fawcett.Allen@epa.gov]; tfoley@southernforests.org; rlubowski@edf.org; danreicher232@gmail.com; bobperciasepe@c2es.org; Ohrel, Sara [Ohrel.Sara@epa.gov]; jmarcus@hf-consulting.net; whohenst@oce.usda.gov; nadine.block@sfiprogram.org; jmartin@ucsusa.org; marty.spitzer@wwfus.org; roger@greenstrategies.com; edieshall@outlook.com; Matt.Willey@drax.com; Thomas.meth@envivabiomass.com; patrick@greenstrategies.com; bobabt@ncsu.edu; joe.bachman@duke.edu; glatta@uidaho.edu; davidacleaves@gmail.com; esingsaa@d.umn.edu; jlewis@catf.us; cwerner@eesi.org; Bartuska, Ann [Bartuska@rff.org]; Wibbenmeyer, Matthew [Wibbenmeyer@rff.org]; frances.seymour@wri.org; bryn.baker@wwfus.org; alsample@pinchot.org; Jennifer.Jenkins@envivabiomass.com; francis.johnson@sei.org; armond@catf.us; Paul_Noel@afandpa.org; jdaley@americanforests.org; pbarua@rebuyers.org
Subject: March 18 Forest Bioenergy workshop summary - FINAL
Attachments: March 18 Carbon Accounting Event Summary FINAL- 12-5-19.pdf

Colleagues, while it has taken much longer than expected, I have finally been able to update and revise this summary. We got some great comments and tried to incorporate to the extent we stayed true to the discussion. Unfortunately, my colleague, Michael Zwirn, departed RFF several months ago; he was the principal point person reviewing and incorporating comments, so it was left to me to complete the review and finalize edits. As you can appreciate, always difficult to drop into someone else's work.

As a reminder, this summary was developed for use by the participants; it will not be posted on the RFF website nor appear as one of our products. If any of you want to reference the content in writing in other discussions, it is probably best portrayed as *Informal Communication*.

I look forward to working with you in the future. ...and stay tuned, we are working toward a public event on forests, forest products and carbon early in 2020. Ann

Ann M. Bartuska | Senior Advisor | Resources for the Future
1616 P St. NW | Washington, DC 20036 | bartuska@rff.org | 202.328.5091

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Carbon Accounting & Forest Bioenergy: Developing a Best Practices Framework

RFF and the Center for Climate and Energy Solutions (C2ES) hosted a half-day workshop under Chatham House Rules on March 18, 2019 on the challenges and competing approaches for accounting for the carbon in forest bioenergy. Attendees represented forest landowners, the forest products sector, federal and state agencies, forest biomass industries, nonprofits and advocates, scholars, and carbon and climate policy NGOs.

Purpose of the Summary

This summary document is designed to capture some of the major comments, ideas, issues and discussion points during the course of the workshop. It does not reflect a consensus view, and in some cases, includes statements of a single individual. The intent is to continue a dialogue that reveals points of for further clarification, definition and agreement. Participants were given the opportunity to review an earlier draft of this summary, and this FINAL version has been modified to reflect some of these points. We thank all of you who have provided comments, either formally or informally.

Background and Rationale for Discussion

Starting in early 2018, RFF began a series of convenings within the forest and forest products sector to address the complex policy and economics choices in using forest management as a tool to address climate change. To date, RFF has hosted three meetings and workshops, beginning with *Forest-Climate Solutions for a Carbon-Constrained Economy: Assessing Opportunities and Obstacles*, with private forest landowners, academic institutions, and philanthropy partners. One of the drivers for these activities is to identify economic options for forest-owners that decrease the likelihood of conversion to other uses.

On March 18, 2019, RFF and the Center for Climate and Energy Solutions (**C2ES**) hosted an invitation-only, facilitated workshop on the challenges of carbon accounting for commercial forest bioenergy. To ensure the discussion was candid, we agreed that comments would be recorded without attribution. In this way, representatives of federal agencies, environmental organizations, and forest sector companies could share views openly, with the goal of reaching some common starting points for further dialogue.

In advance of the workshop, RFF, C2ES, and colleagues from the forest products sector and climate policy researchers prepared a brief **introductory paper** outlining two alternative approaches to carbon accounting of forest biomass, a prominent issue in the debate regarding forest carbon tracking. We and our partners recognized that a good reporting framework for biomass energy emissions will identify the circumstances under which the user can report zero carbon emissions, and it will be one that meets other key economic and ecological goals. We viewed the March 18 workshop as part of longer-term discussion on the role of forests as society responds to climate mitigation and adaptation. The development of a carbon accounting framework that meets the needs of all parties is an essential step. An approach to forests as a natural climate solution should encourage the use of

December 5, 2019

sustainable and appropriately-sourced forest biomass; discourage the use of inappropriate forest biomass for energy; and create incentives to maintain stable or growing forests. In coming months and years, RFF and partners aim to expand our convening and analytical role on forests and climate change adaptation and mitigation.

Key Takeaways from Discussion

Framing:

Following an introduction by each of the ~45 participants, the discussion on March 18, 2019 began with framing remarks from the facilitator, Dan Reicher of Stanford University, explaining the goals of the day's discussion. In the introduction, it was made clear that a long-term goal was to identify a mutually agreed-upon best practices framework for accounting for the carbon in forest bioenergy, recognizing that different stakeholders might reach different conclusions on whether a specific forest bioenergy product or supply chain was carbon-neutral, carbon-negative, or carbon-additive.

In his framing, Dr. Reicher explained the goal of using a “stoplight” (Red/Green/Yellow) approach, similar to approaches used in seafood sustainability (the Seafood Watch program of the Monterey Bay Aquarium) and other third-party sustainability assessments. He reiterated that the goal is to populate options within the stoplight framework for energy utilities and customers to make capital commitments to switch away from fossil fuels and progress toward a low-carbon future. The “stoplight” tool was used as a mechanism to get multiple issues into the discussion, while at the same time identifying areas of agreement.

Discussion: Economic Incentives to Maintain Forest Lands

Initial discussions in the open forum circled largely around the option to create economic incentives to maintain forest lands as forests, and avoid conversion to other uses that cannot provide the same climate change response and other ecological services. Participants observed that in the United States, the demand for wood and forest products has resulted in healthy supplies of wood, and the rationale to maintain forests as working lands. One panelist observed, “When you spend \$1 billion on wood, people plant more trees,” and the available data support that observation. Some participants noted that other ecosystem services, not just carbon storage, are also part of the analysis of the value of maintaining forests as working lands. However, given the focus on carbon sequestration and climate mitigation, the conversation returned to the question of the carbon accounting.

One speaker noted (paraphrased), that “Our objective is to try to put ourselves in the shoes of an energy user and trying to tell them what’s Green, Yellow, and Red” or go/ no-go in terms of carbon neutrality and eligibility for various climate programs in the European Union, United Kingdom, and at the state level in the United States. This is different than developing a regulatory policy; it’s a market-oriented set of guidelines.

The discussion was directed to consider two primary competing approaches for carbon accounting: should one account for forest carbon at the stand level, or at the larger landscape – and if so, at what kind of scale? Participants observed that one of the main challenges is a lack of data at some scales, not just about trees but also about energy communities. One participant noted that if you have data and you can trust it, you have less to worry about in terms of time horizons and forward modeling in

forest carbon storage. For instance, at the landscape scale in the U.S. Southeast, 2% of private forest is harvested every year while the rest is simultaneously growing and sequestering additional carbon. The landscape level also provides greater assurances on data quality than a stand level. For example, relying on the growth rates and carbon sequestration capacity of individual trees or forest stands is a difficult proposition, but if a manager can rely on trustworthy carbon data at a regional scale, the smaller-scale modeling is less critical. It was noted that the Forest Inventory and Analysis (FIA) program, managed by the U.S. Forest Service, does provide a framework for reporting at the regional and national scales, and can be intensified to meet state or local reporting.

Projecting forward, given policy trends, the participants noted that in a world aiming for deep decarbonization, once managers begin to think about large scale deployment of bioenergy and co-firing, the time question does become important. More immediately, the goal is to shift away from the most carbon-intensive sources of power, principally coal, and prevent the worst outcome of a large loss of forest carbon. Coal does not have to be replaced by biomass, but biomass is part of the renewable energy discussion. When RED 2 is implemented in the European Union in 2020, it won't be possible to deliver biomass into EU if biomass cannot be shown to be stable or increasing. In private lands, to ensure that these conditions are met, participants suggested looking at the incentives private landowners face, and looking at the reforestation trust fund for public lands as a bioenergy source.

Large corporations are now making critical business decisions that will have an impact on forest carbon storage potential and the biomass sector. For instance, the Renewable Thermal Collaborative represents Fortune 500 companies that have been looking to reduce the carbon emissions of their thermal sectors, including large manufacturing and agribusiness firms like Cargill, Mars, and General Motors. These firms need to show progress on their climate commitments and need to be able to say they're moving toward 100% neutrality, but don't know how to say it without the accounting. As buyers of forest biomass energy, their perspective is critical; they are also concerned about criticisms of "greenwashing" that have been made in the carbon offset markets. In the private sector, the insurance industry is now also a critical voice; how long will companies want to insure lands that have been destroyed by hurricanes and wildfires due to increased climate risks?

In brief, the private sector is grappling with a tricky scientific and economic question: What is the right mix of use of forest products for a given industry or firm, and does biomass make sense for a business's energy needs under various carbon pricing scenarios, if it receives payment for sequestration but penalties for emissions? From a climate perspective, can you achieve the same benefit from burning fossil carbon and then doing some carbon offsets on the landscape that sequesters the carbon, vs letting those trees stand or using the timber for long-lived buildings or other uses that may be carbon-neutral? Tracking carbon under different scenarios of forest use is critical to these questions.

In-Depth: The Mechanics of a "Stoplight" Framework

A detailed discussion took place on the mechanics of a "stoplight" framework in which biomass derived from specific timber sources could be labeled "green," as carbon neutral.

Some attendees had overall concerns about the stoplight approach as it might take some important things off the table where innovation could drive improvement – for instance, in terms of intensively managed forest landscapes. Others struggled with stoplight methodologies because there are other factors that guide choices around biodiversity and conservation, not solely carbon storage, and there

is the added complexity of differentiating biomass using stocks and feedstocks approach. Our intention was to use the “stoplight” framework to spur discussion and to reveal areas of agreement, but not necessarily to assume adoption of the approach. The review of the earlier draft of this Summary further revealed significant concerns in the “stoplight” table, pointing out: 1) unvoiced disagreement in the content, 2) inconsistencies in categorization, and 3) insufficient time to discuss and vet the content. The Table is included in this Final Summary, with the caveat that it reflects very provisional thinking, and may in the long-run not be useful, but is faithful to the workshop discussions. We would recommend a further exploration of the concept to improve clarity, with the participation of the user communities.

Participants recommended a variety of approaches that have been made to date which should be evaluated for their utility in pursuing the “stoplight” framework:

- WWF’s stoplight system has broken down the carbon-neutrality accounting by wastes, residues, residues by types.
- The World Resources Institute process is ongoing but may not be finalized for a couple years.
- The Forest Stewardship Council standard is “it’s green if...” it meets certain baseline criteria.

There was a suggestion that RFF and C2ES should collaborate with WWF on their stoplight system that is currently being developed since buyers are not wanting to wait 5 years for an accounting system.

Characteristics of forest biomass to consider in a “stoplight” framework

There were many ideas and comments made during this discussion that surfaced different perspectives and concepts. A few are highlighted as they reflect some points that need further discussion.

The characteristics of the wood are what makes it potentially suitable for use as biomass energy, not its location. But at the same time, it’s important to reflect the market drivers and demand when assessing what wood products can make carbon-neutral biomass energy sources. It was suggested that we could call this a context-based approach if we’re incorporating markets.

For forest residues, it was noted that the definition of a residue has to focus on the alternative fate of what would happen to the carbon in the residues, not its economic value to industry. For example, unsaleable wood should not *a priori* be in the “green” category. Specific questions involved the portion of the material on a truck to be turned into wood pellets – how can a user tell what used to be a branch, and what used to be a trunk? Observers noted that this set of questions leads us back to the value of taking a landscape view of forest carbon, rather than trying to drill down to the stand level of analysis. Participants agreed that we were trying to avoid incremental short-term emissions from forest harvest, which will be captured as a decline in forest carbon stocks. Those are the data we can use to decide whether we are achieving our ultimate goal of providing a resource that has a neutral or net carbon positive result.

Thinning of forests is a complex question; for instance, how to evaluate the carbon accounting of thinning in areas where forest fires are a regular and increasing occurrence. If thinning needs to occur and there is no end use for that material, where does it go? Where does biomass energy fit in?

One attendee speculated about the incentives to collect forest biomass in thinning operations, and the innovation challenges. One could plant in close densities, and thin, but seedlings are expensive. So instead a hypothetical land manager might plant trees further apart, skip the thinning, and control the vegetation with herbicides or other technologies. But if there was a market for first thinning which would cost more than market would allow, the manager could afford to plant more seedlings, sequester carbon faster, and then have two thinnings that would produce carbon-neutral energy. (This would have previously been considered pre-commercial, but would no longer be pre-commercial because the manager is getting paid for it)

Terminology is important; for instance, there was concern about the use of the term “sawmill waste,” since it was the residues that are integral to manufacturing and have other uses.

Finally, some participants speculated about a risk that biomass, the lowest value of material, would be privileged under carbon pricing systems to a point where it received a higher price than sawn timber. If prices were to change, some element of the market would be distorted. If biomass value ever got to that higher value, is that a “red light” trigger?

A table in the appendix represents the kinds of forest products that might be designated as “green,” “yellow,” and “red” sources of forest biomass based on this preliminary discussion.

NOTE: there was no significant discussion or edit of the designations, and readers are encouraged to consider the Table as a coarse filter at this point.

In-Depth: Ecoregions and Landscape Analysis

After a break, the discussion continued to a consideration of ecoregion-based carbon accounting. There was a demonstration of such an approach by an attendee in the forest land management sector. There were good questions from the attendees on how to operationalize these ecoregion- and landscape-based analyses. For instance:

- How is this approach preferable to a grid?
- How does this analysis separate out national parks and public lands that aren’t under private management, versus working lands?
- What is a defined space so that there is an acceptance that you’re harvesting *here* and growing *here*?

Attendees pointed out the flow of carbon in a landscape is not necessarily tied to the effect of increased bioenergy uses. Can changing carbon stocks be used as a proxy to determine whether lands would be “in” a system as a carbon-neutral energy source, or “out”? Some participants objected that the two are unrelated; one is not an indicator of biomass demand on carbon stocks.

Participants argued strongly that current approaches were not properly valuing the carbon being stored in the landscape. It’s critical to show that carbon is valued highly enough that landowners can see it, and make decisions on land use accordingly. Some attendees offered that the decisions were very case specific: What land use decisions were being made, and would the carbon accounting properly value both what’s going into the bioenergy market, but also the sequestration that’s happening on the landscape? The risk is that otherwise we will have distortions where the biological carbon sequestration is not accounted properly. There is a need to describe the pools and pathways

of carbon transfer or conversion at the appropriate scale and to include the variability inherent in different forest ecosystems.

What's Next

RFF, C2ES, and other participants hope to lay the groundwork for future invitation-only convenings as well as public events to address the complex science and policy challenges of managing forest resources for climate benefits. This must include tackling the issue of the carbon accounting of forest biomass as well as of other forest products. Soil health and the ability to increase soil carbon as part of the climate solution toolbox is also of importance. By hosting candid discussions among key stakeholders from across the spectrum of forest management, forest products, and conservation, we aim to build a strong trust relationship with practitioners to help frame the issues of forest carbon and bioenergy, generate a common platform of baseline agreement, and build a forward-looking research portfolio.

Appendix I: Possible “Stoplight” designations for forest bioenergy sources

Editor’s note: There was quite a bit of feedback on this Table, including confusion on the placement of some elements as well as the lack of clarity on some phrases (e.g. “if price for biomass increases”). We are leaving the Table intact as part of the record of the workshop, but we agree that significant review and refinement is warranted, prior to using the “stoplight” approach.

Green	Yellow	Red
Anything is carbon neutral if it doesn’t lead to deforestation	Pre-commercial thinning	Wood from highly-biodiverse or protected areas
Ecoregions approach	Dead/dying/disease	Saw log sized material
Forest residues	Low grade roundwood	“If price for biomass increases”
Biomass as risk management, especially interior west	Thinning sawmill product	
Sawmill waste	Fire management harvest (small diameter)	
Bark		
Dead, dying, diseased	How to account for fire-prone areas? <ul style="list-style-type: none"> • Dead dying - rapid response to forest damaged by storms • Dead dying – in special cases of declining forests 	
Low grade roundwood		
Thinnings		
Fire management		
Branches		
Tops		
Forest products manufacturing residuals		
Bio-wastes		
If it meets a standard: FSC, non-carbon standards		
Biomass sourced from a supply region w/stable or increasing carbon stocks can be treated as having zero carbon		

Message

From: Steller, John [Steller.John@epa.gov]
Sent: 10/29/2019 5:23:58 PM
To: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: FW: Biogenic PSD 11/1 meeting

FYI - Below are the external attendees for Fridays meeting.

From: Hunt, Tim <Tim_Hunt@afandpa.org>
Sent: Tuesday, October 29, 2019 11:23 AM
To: Steller, John <Steller.John@epa.gov>; Kornylak, Vera S. <Kornylak.Vera@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>
Cc: Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>; Noe, Paul <Paul_Noel@afandpa.org>; Chip Murray <cmurray@nafoalliance.org>
Subject: RE: Biogenic PSD 11/1 meeting

John, Here are the folks coming on Friday for the 10 AM meeting.

1. Alan Kroeger
2. Jennifer Jenkins
3. Russ Frye
4. Paul Noe
5. Jan Poling
6. Stan Lancey
7. Jerry Schwartz
8. Jeff Holmstead
9. Chip Murray
10. Sam Boxerman
11. Tim Hunt

Hope this eases the process of clearance, we will get there 15-20 minutes early. John – should we call you when we arrive?

Tim

From: Hunt, Tim <Tim_Hunt@afandpa.org>
Sent: Monday, October 21, 2019 5:59 PM
To: Kornylak, Vera S. <Kornylak.Vera@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>
Cc: Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>; Noe, Paul <Paul_Noel@afandpa.org>; Chip Murray <cmurray@nafoalliance.org>
Subject: Biogenic PSD 11/1 meeting

Vera, Sara, and John,

Thank you and Yvonne again for pulling together OAQPS and Climate Programs staff to meet with us on November 1 at 10 AM at EPA's offices in DC.

To make the meeting as productive as possible, we are providing that attached paper titled, "Policy Option Considerations". Please share it with others expected to attend the meeting or involved with the rulemaking. We hope that attendees can read it in advance so we can spend our limited time discussing key aspects of the paper and answering your questions. Knowing that you are developing a proposed rule and understanding your procedures, we would expect this material to be placed in the rulemaking docket.

In addition, we are attaching a recent statement from members of the National Association of University Forest Resources Programs, which reiterates key points in their prior letter to Administrator McCarthy on November 6, 2014 on the science fundamentals of forest biomass carbon accounting.

Finally, as for an agenda for the meeting, after introductions it would be focused on the points presented in the paper concerning how forest planting and growth will offset bioenergy demands given forest economics. If helpful, we could break the discussion into each of the four major sections of the paper:

- Introductions
- Review of SAB work
- Biomass residuals and biowastes
- Next steps

I will provide you a list of attendees from AF&PA, AWC, NAFO and Enviva closer to the meeting to help with security clearance into the building. Let me know which room we will be gathering in.

Thank you,

Timothy Hunt

Senior Director, Air Quality Programs
AMERICAN FOREST & PAPER ASSOCIATION
AMERICAN WOOD COUNCIL
1101 K Street, NW, Suite 700, Washington, DC 20005
Office: 202-463-2588
Email: thunt@awc.org or Tim_Hunt@afandpa.org

Message

From: Gunning, Paul [Gunning.Paul@epa.gov]
Sent: 5/28/2020 2:59:36 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: Fw: PLEASE READ - Biomass section
Attachments: ACE Brief Old Biomass 05.26.2020 DO NOT EDIT.docx

From: Harvey, Reid <Harvey.Reid@epa.gov>
Sent: Thursday, May 28, 2020 10:34 AM
To: Gunning, Paul <Gunning.Paul@epa.gov>
Subject: FW: PLEASE READ - Biomass section

Just FYI – didn't see you copied on this.

From: Greenglass, Nora <Greenglass.Nora@epa.gov>
Sent: Thursday, May 28, 2020 9:54 AM
To: Vijayan, Abi <Vijayan.Abi@epa.gov>; Marks, Matthew <Marks.Matthew@epa.gov>; Conrad, Daniel <conrad.daniel@epa.gov>; Hoffman, Howard <hoffman.howard@epa.gov>; Schramm, Daniel <Schramm.Daniel@epa.gov>; Jordan, Scott <Jordan.Scott@epa.gov>; Krallman, John <krallman.john@epa.gov>; Doster, Brian <Doster.Brian@epa.gov>; Srinivasan, Gautam <Srinivasan.Gautam@epa.gov>; Culligan, Kevin <Culligan.Kevin@epa.gov>; Hutson, Nick <Hutson.Nick@epa.gov>; Swanson, Nicholas <Swanson.Nicholas@epa.gov>; Harvey, Reid <Harvey.Reid@epa.gov>; Stenhouse, Jeb <Stenhouse.Jeb@epa.gov>; Keaveny, Brian <Keaveny.Brian@epa.gov>; Svendsgaard, Dave <Svendsgaard.Dave@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>; Eschmann, Erich <Eschmann.Erich@epa.gov>; Adamantiades, Mikhail <Adamantiades.Mikhail@epa.gov>; Sarofim, Marcus <Sarofim.Marcus@epa.gov>; Werner, Christopher <Werner.Christopher@epa.gov>; McLamb, Marguerite <McLamb.Marguerite@epa.gov>
Subject: RE: PLEASE READ - Biomass section

Ex. 5 Deliberative Process (DP)

From: Greenglass, Nora
Sent: Thursday, May 28, 2020 9:04 AM
To: Vijayan, Abi <Vijayan.Abi@epa.gov>; Marks, Matthew <Marks.Matthew@epa.gov>; Conrad, Daniel <conrad.daniel@epa.gov>; Hoffman, Howard <hoffman.howard@epa.gov>; Schramm, Daniel <Schramm.Daniel@epa.gov>; Jordan, Scott <Jordan.Scott@epa.gov>; Krallman, John <krallman.john@epa.gov>; Doster, Brian <Doster.Brian@epa.gov>; Srinivasan, Gautam <Srinivasan.Gautam@epa.gov>; Culligan, Kevin <Culligan.Kevin@epa.gov>; Hutson, Nick <Hutson.Nick@epa.gov>; Swanson, Nicholas <Swanson.Nicholas@epa.gov>; Harvey, Reid <Harvey.Reid@epa.gov>; Stenhouse, Jeb <Stenhouse.Jeb@epa.gov>; Keaveny, Brian <Keaveny.Brian@epa.gov>; Svendsgaard, Dave <Svendsgaard.Dave@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>; Eschmann, Erich <Eschmann.Erich@epa.gov>; Adamantiades, Mikhail <Adamantiades.Mikhail@epa.gov>; Sarofim, Marcus <Sarofim.Marcus@epa.gov>; Werner, Christopher <Werner.Christopher@epa.gov>; McLamb, Marguerite <McLamb.Marguerite@epa.gov>
Subject: PLEASE READ - Biomass section
Importance: High

Ex. 5 AC/AWP/DP

Message

From: Steller, John [Steller.John@epa.gov]
Sent: 10/24/2019 8:15:32 PM
To: Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
Subject: RE: Biomass one-pager briefing doc
Attachments: Biomass Three Rule Briefing Paper-10-24-19.docx

Paul,
Attached is the updated document OAQPS is sending to Chery/Mike K. for review. Peter is out of the office on work travel

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
John

From: Gunning, Paul <Gunning.Paul@epa.gov>
Sent: Thursday, October 24, 2019 9:25 AM
To: Steller, John <Steller.John@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>
Cc: Ohrel, Sara <Ohrel.Sara@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Subject: RE: Biomass one-pager briefing doc

Yes, sound good John. Thx

From: Steller, John <Steller.John@epa.gov>
Sent: Wednesday, October 23, 2019 4:32 PM
To: Gunning, Paul <Gunning.Paul@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>
Cc: Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: RE: Biomass one-pager briefing doc

Paul,
Thanks for your comments, Bill and Allen relayed them to me. Below is our understanding of your main comments and how we plan to address them in the OAQPS document:

-
- **Ex. 5 Deliberative Process (DP)**
-

Thanks,
John

From: Steller, John
Sent: Wednesday, October 23, 2019 3:49 PM
To: Gunning, Paul <Gunning.Paul@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>

Cc: Ohrel, Sara <Ohrel.Sara@epa.gov>

Subject: Biomass one-pager briefing doc

Paul,

Please find the new biomass Administrator briefing one-pager attached. This document is based on feedback received during the last meeting with the Administrator.

Ex. 5 Deliberative Process (DP)

Please let us know if you have any questions or edits to incorporate into the document.

Thanks,
John and Sara

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 10/18/2019 8:18:39 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
CC: Steller, John [Steller.John@epa.gov]
Subject: draft lit review plan
Attachments: Forest biomass literature review plan 10 18 19.docx

Hello Allen and Bill,

We have put together the attached draft literature review plan and would like to ask you for your initial feedback. We figured it would be useful to set down some basic parameters/guiding principles before diving in, which we plan to do on Monday.

Thank you,
Sara and John

Sara Bushey Ohrel
Climate Change Division
U.S. Environmental Protection Agency
(202) 343-9712
ohrel.sara@epa.gov

***deliberative

Message

From: Steller, John [Steller.John@epa.gov]
Sent: 9/24/2019 6:59:04 PM
To: Gunning, Paul [Gunning.Paul@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: RE: updated draft biogenic CO2 briefing document

Hi all,

Just a heads up, I talked to Sarah Baker and Peter has asked for another meeting this week between staff, including him, ChrisG, Sarah D. and all of us, to discuss the briefing document and OAR's recommended approach before this goes to the Administrator. OAQPS is going to send around the updated briefing document for us and OGC to edit further which we can make sure the timing discussion is realistic.

Sarah Baker is also putting in a new meeting request this week with the Administrator but unclear when that meeting would happen. I will keep everyone up to speed if I hear more.

Thanks,
John

From: Steller, John
Sent: Tuesday, September 24, 2019 2:23 PM
To: Gunning, Paul <Gunning.Paul@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: updated draft biogenic CO2 briefing document

Hi Paul,

Attached is an updated draft biogenic CO2 briefing paper

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
John and Sara

John Steller
U.S. Environmental Protection Agency
OAR-OAP-CCD-CPB
Steller.John@epa.gov
202-343-9319

**deliberative

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 5/18/2020 12:24:32 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
CC: Steller, John [Steller.John@epa.gov]
Subject: FW: ACE draft brief this evening

Good morning Allen and Bill,

Ex. 5 AC/DP

Thanks,
Sara

From: Greenglass, Nora <Greenglass.Nora@epa.gov>
Sent: Friday, May 15, 2020 3:47 PM
To: Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>
Subject: ACE draft brief this evening

****Internal and deliberative, attorney-client privileged****

Ex. 5 AC/DP

Nora Greenglass
Office of General Counsel | Air & Radiation Law Office
U.S. Environmental Protection Agency
202-564-3095 (office)
202-603-6299 (cell)

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 8/26/2019 7:15:38 PM
To: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
CC: Steller, John [Steller.John@epa.gov]
Subject: Re: draft biogenic CO2 technical approaches doc

I realize that we should've been more specific in terms of areas we have made edits. Specifically, we added:

Ex. 5 Deliberative Process (DP)

On Aug 26, 2019, at 1:08 PM, Ohrel, Sara <Ohrel.Sara@epa.gov> wrote:

Hello Bill and Allen,

Attached is an updated version of the biomass backgrounder/technical options for assessing biomass in PSD.

Ex. 5 Deliberative Process (DP)

Thank you,
Sara (and John)

Sara Bushey Ohrel
Climate Change Division
U.S. Environmental Protection Agency
(202) 343-9712
ohrel.sara@epa.gov

***deliberative

From: Irving, Bill <Irving.Bill@epa.gov>
Sent: Friday, August 16, 2019 4:01 PM
To: Ohrel, Sara <Ohrel.Sara@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>
Cc: Steller, John <Steller.John@epa.gov>
Subject: Re: draft biogenic CO2 technical approaches doc

Sara/John

Thanks for pulling this together. Some comments attached (mostly as comments rather than edits).

Ex. 5 Deliberative Process (DP)

Bill

From: Ohrel, Sara <Ohrel.Sara@epa.gov>
Sent: Friday, August 16, 2019 12:56 PM
To: Fawcett, Allen <Fawcett.Allen@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>
Cc: Steller, John <Steller.John@epa.gov>
Subject: draft biogenic CO2 technical approaches doc

Hello Allen and Bill,

Attached is a rough draft of the biogenic CO2/PSD technical approaches document for your review.

A couple notes:

-
- **Ex. 5 Deliberative Process (DP)**

Thank you,
Sara and John

Sara Bushey Ohrel
Climate Change Division
U.S. Environmental Protection Agency
(202) 343-9712
ohrel.sara@epa.gov

***deliberative

<technical options BCO2 in PSD 8 26 19.docx>

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 5/4/2020 7:52:46 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Steller, John [Steller.John@epa.gov]
Subject: RE: biomass check in
Attachments: Factor Analysis values 5 4_update.docx

Hi all,

Attached is an updated factors analysis document per feedback received from Allen.

-----Original Appointment-----

From: Ohrel, Sara
Sent: Friday, May 01, 2020 1:02 PM
To: Ohrel, Sara; Fawcett, Allen; Bill Irving; Steller, John
Subject: biomass check in
When: Monday, May 04, 2020 4:00 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Join Microsoft Teams Meeting

Ex. 6 Personal Privacy (PP) United States, Washington DC (Toll)

Conference ID: Ex. 6 Personal Privacy (PP)

[Local numbers](#) | [Reset PIN](#) | [Learn more about Teams](#) | [Meeting options](#)

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 5/1/2020 9:19:01 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]
CC: Steller, John [Steller.John@epa.gov]
Subject: factor analysis draft values
Attachments: Factor Analysis values 5 1 20_f.docx

Hi Allen and Bill,

In the attached we have summarized the literature review factor analysis values to date. We are continuing to QAQC papers but want to share this first cut with you for our discussion Monday.

Looking forward to your feedback then. Have a nice weekend,
Sara and John

Sara Bushey Ohrel
Climate Change Division
U.S. Environmental Protection Agency
(202) 343-9712
ohrel.sara@epa.gov

***deliberative

Message

From: Steller, John [Steller.John@epa.gov]
Sent: 6/5/2019 8:55:17 PM
To: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: FW: Review of response to biomass/appropriations comment

<!--[if lte mso 15 || CheckWebRef]-->

Steller, John has shared a OneDrive for Business file with you. To view it, click the link below.



ACE response to AF&PA comment.docx

<!--[endif]-->

Bill and Allen,

Ex. 5 AC/DP

Thanks,
John and Sara

From: Greenglass, Nora
Sent: Wednesday, June 05, 2019 1:51 PM
To: Holden, Allison <Holden.Allison@epa.gov>; Doster, Brian <Doster.Brian@epa.gov>; Marks, Matthew <Marks.Matthew@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>
Subject: Review of response to biomass/appropriations comment

Ex. 5 AC/DP

Nora Greenglass
Office of General Counsel | Air & Radiation Law Office
U.S. Environmental Protection Agency
202-564-3095 (office)
202-603-6299 (cell)

Message

From: Steller, John [Steller.John@epa.gov]
Sent: 6/18/2019 8:06:01 PM
To: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
CC: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: biomass PSD briefing document
Attachments: Wehrum June Briefing Document v3-OAP.docx

Bill and Allen,

Attached is the latest biomass briefing document for next week's meeting with Bill W. OAQPS has asked for any feedback by 4pm tomorrow (19th) so they can get to Bill's office Thursday. The new document reflects Peter's direction from the meeting on May 29th.

To note, the document is currently 11 pages long but the first 5 pages are the main briefing document – for sake of length, some of the technical/legal analysis has been moved to the appendix as supporting information.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Please let me know if you have any questions, thanks.

-John

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 2/21/2019 9:07:31 PM
To: Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
CC: Gunning, Paul [Gunning.Paul@epa.gov]; Steller, John [Steller.John@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: Re: Discussion of Biomass & CCS for Bill Briefing

Ex. 5 Deliberative Process (DP)

On Feb 21, 2019, at 3:30 PM, Kocchi, Suzanne <Kocchi.Suzanne@epa.gov> wrote:

I just sent the below from Paul's computer.

From: Gunning, Paul
Sent: Thursday, February 21, 2019 3:30 PM
To: Steller, John <Steller.John@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Cc: Fawcett, Allen <Fawcett.Allen@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: RE: Discussion of Biomass & CCS for Bill Briefing

Ex. 5 Deliberative Process (DP)

From: Steller, John
Sent: Thursday, February 21, 2019 3:19 PM
To: Gunning, Paul <Gunning.Paul@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Cc: Fawcett, Allen <Fawcett.Allen@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: RE: Discussion of Biomass & CCS for Bill Briefing

Hi All,

Ex. 5 Deliberative Process (DP)

Thanks,
John and Sara

-----Original Appointment-----

From: Swanson, Nicholas

Sent: Thursday, February 21, 2019 11:31 AM

To: Ohrel, Sara; Steller, John; Gunning, Paul; Irving, Bill; Fawcett, Allen; Greenglass, Nora; Hutson, Nick; Culligan, Kevin; Skinner-Thompson, Jonathan; Adamantiades, Mikhail

Cc: Hoffman, Howard; Zenick, Elliott; Marks, Matthew

Subject: Discussion of Biomass & CCS for Bill Briefing

When: Thursday, February 21, 2019 12:30 PM-1:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: RTP-OAQPS-919-541-4486-SPPD/Phone-Line/RTP-OAQPS-BLDG-C

New document to talk through has been attached

Because the Bill Wehrum briefing today got rescheduled to Friday, we wanted to take the opportunity to make sure that we get the materials and discussion exactly right. Thanks for all of your help up to this point

Message

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 9/26/2018 4:34:44 PM
To: Steller, John [Steller.John@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: RE: SAB call (9/26)
Attachments: 73835686 Anne Smith.pdf

Interesting if you haven't read it yet

From: Steller, John
Sent: Wednesday, September 26, 2018 10:47 AM
To: Fawcett, Allen <Fawcett.Allen@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Cc: Irving, Bill <Irving.Bill@epa.gov>; Cole, Jefferson <Cole.Jefferson@epa.gov>
Subject: SAB call (9/26)

Hi All –

This week SAB posted a few new documents to their website for this afternoon's teleconference. One of the documents, attached, is SAB committee member comments on the draft quality review report. In addition, the list of public speakers as well as written public comments are now posted online – including comments from members of the former biogenic carbon panel. Finally, the SAB has also posted a chronology document of SAB actions on the draft biogenic framework report.

SAB website:

<https://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/42057c1cb38c7ad5852582f8004f2de7!OpenDocument&Date=2018-09-26>

The SAB discussion on the framework is not scheduled to start until around 2:30pm today. Call-in number is provided via a link on the SAB website.

We will plan to have a summary of the call and what the outcome/next steps are for Paul/Sarah after the call is wrapped up today.

Thanks,
John and Sara

Comments of Anne Smith on the 8-29-18 SAB Draft Report: “SAB review of Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources (2014)”

September 25, 2018

1. Were the charge questions adequately addressed?

In many of its sections, I do not find this review draft to provide useful responses. If the objective of this SAB review draft is to provide guidance that can help the agency improve either its framework, or its explanation of that framework, I think this draft review is unlikely to meet that objective. If it is to provide approbation or disapprobation of certain technical aspects of the agency’s framework, it does not do so clearly. I see little or no actionable material in the recommendations, other than what I interpret as a refrain that the charge questions cannot be answered until a specific policy context is provided. Even that refrain, however, seems to me to be overstated.

For example, on p. 12, in response to Question 1(a) regarding whether the temporal scale should vary by policy, the draft review states that “The time horizon, T, for consideration of carbon stock changes should be chosen based on the policy objective”(12:34-35). However, in the next paragraph, apparently in response to Question 1(a)(i) regarding “what goals/criteria might support choices between longer and shorter time scales” if the time scale should vary by policy yet multiple policies cover the emissions in question, the draft review states that “In the service of simplicity, a single time horizon may be selected to serve multiple objectives, in which case the tradeoffs need to be explored to ensure the most parsimonious temporal framework is selected and thus dis-benefits to the environment and public health are minimized.” (p12:44-46). These two statements, in consecutive paragraphs, are effectively contradictory. If a single time horizon can be acceptable for a hypothetical case where multiple policies are in question, there would seem to be no reason that a single horizon could not be identified that would suffice for all potential policies.

I have deeper concerns with the second statement, however, which is that it is a non-answer to Question 1(a)(i). I would expect that the only appropriate time horizon would be the longest one necessary to properly address any one of the multiple policies in question -- because anything shorter would not be appropriate for at least one those policies. But the draft review does not note this logical point (or refute it, if that is what the Panel believe). It instead combines three undefined notions to provide an opaque response: (1) that some time horizon choices might be more “parsimonious;” (2) that identifying such a parsimonious framework requires consideration of “tradeoffs;” and (3) that parsimony will result in minimization of dis-benefits to public health. What “parsimonious” means, what the “tradeoffs” consist of, and why the objective of estimating a BAF for GHGs should encompass the minimization of public health impacts are all unexplained. As I result, the statement does not answer the charge question with any actionable guidance, while also creating new sources of ambiguity and confusion for the reader.

There are other parts of the draft review that do not seem to be responding to the charge questions at all. Two examples are the responses to 2a & b (combined), and to 2c. The draft review combines its responses to Questions 2a & b because “both questions relate to the size of the simulated change in demand for biomass feedstocks” (p. 16); however, the one-paragraph response that follows never mentions magnitude of change, and seems to address a different topic, which is regionality of a BAF estimate. Question 2c asks what baseline the demand shock should be

simulated against, but the response appears to address size of the demand shock rather than the baseline against which the demand shock is to be simulated.

2. Are there any technical errors or omissions in the report or issues that are not adequately dealt with in the draft report?

I have not identified any outright technical errors. However, on p. 1, the draft review notes that the issues that must be considered in developing a BAF estimate are complex, and the framework may become very complex as a result. It then concludes by stating that “Often, simple models are best.” (p.1:39). The justification for this conclusion seems to be an observation that results of complex models are more dependent on their input assumptions(p. 1:37-38). I consider both the observation and the conclusion to be technically misleading, and thus inappropriate as guidance to EPA. Results of simple models are also dependent on their input assumptions, with no reason to believe that they are “less” dependent. The only difference is that there may be fewer explicit assumptions to adjust in a simpler model, however, embedded in simpler models are far more hidden assumptions that cannot be adjusted or even observed -- the very assumptions that were made in order to achieve its formulaic simplicity. I agree that complex models should be subjected to sensitivity analyses to better understand or interpret their results, and it seems a missed opportunity that the draft review has not recommended doing more of this sort of sensitivity analysis for the various feedstock and region BAF estimates, and also to better understand how important the choice of biomass demand shock sizes might be to the resulting BAF estimates. Such sensitivity analyses can even be used to identify ways to reduce a complex model to a simpler set of relationships, or meta-model, in a manner that does not create error or biases. However, it is technically misleading to suggest that the challenges in developing a sound BAF estimate can be reduced or managed by choosing to use a simpler model. This is only a reasonable course of action if the simpler model has been shown to provide reliable approximations of the results of more complete (aka “complex”) representations of the phenomena being addressed.

3. Is the draft report clear and logical?

I find some of the responses unresponsive to the question, and many to be unhelpful as guidance. But in addition, the writing is unclear and the points do not always seem to flow logically. In many places, it seems as if the document was created via cut-and-paste from some other report, stringing together paragraphs that were not originally written as a unified sequence of thoughts. I also find the section on pp. 14-15 that contains two graphs very difficult to follow. The figures are not explained in the text, and generally the additional cumulative concept is not clearly enough explained to support the recommendation that follows in p. 16.

4. Are the conclusions drawn or recommendations provided supported by the body of the draft report?

Given the concerns I’ve expressed above, I find it difficult to answer this in the affirmative.

Message

From: Irving, Bill [Irving.Bill@epa.gov]
Sent: 4/15/2020 4:12:05 PM
To: Ohrel, Sara [Ohrel.Sara@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
CC: Steller, John [Steller.John@epa.gov]
Subject: RE: biogenic carbon

Ex. 5 Deliberative Process (DP)

From: Ohrel, Sara <Ohrel.Sara@epa.gov>
Sent: Wednesday, April 15, 2020 11:56 AM
To: Fawcett, Allen <Fawcett.Allen@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>
Cc: Steller, John <Steller.John@epa.gov>
Subject: FW: biogenic carbon

FYI.

From: Baker, Sarah <baker.sarah@epa.gov>
Sent: Wednesday, April 15, 2020 11:53 AM
To: Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>; Greenglass, Nora <Greenglass.Nora@epa.gov>
Subject: FW: biogenic carbon

Just FYI... I've sent it to Mike Koerber to get some direction on how to respond.

From: cmiller@ajw-inc.com <cmiller@ajw-inc.com>
Sent: Wednesday, April 15, 2020 11:44 AM
To: Baker, Sarah <baker.sarah@epa.gov>
Subject: biogenic carbon

Hi Sarah - my client, the Plant Based Products Council/the Corn Refiners Association, asked me to get some information regarding a statement that AA Idsal made during a recent conference call. The client told me that you were one of 2 or 3 other EPA staff on the call, so I'm hoping you'll know the answer.

They told me that AA Idsal had changed her position from August and that the impending rule regarding biogenic carbon will only cover forest biomass resources and related Clean Air Act permitting actions and will no longer address biogenic carbon emitted during the processing of short-cycle annual crops like corn, soybeans, etc. Apparently, though I'm getting it second hand so it could be mistranslated, she referenced a variety of studies which suggest the science on such crops carbon balance/life cycle analysis is uncertain, insufficient or maybe leaning against EPA making a clear determination, particularly not one declaring these crop-related biogenic emissions as de minimis.

Would you be able to point me to those studies or the information she was referencing? There doesn't seem to be much in the literature to indicate that de minimis is off the table.

Thanks, Chris

Christopher Miller, Partner

AJW, Inc.

2200 Wilson Blvd, Suite 310

Arlington, VA 22201-3352

202-296-8086 x112 desk

202-257-8691 cell

Message

From: Gunning, Paul [Gunning.Paul@epa.gov]
Sent: 2/18/2020 4:02:07 PM
To: Ohrel, Sara [Ohrel.Sara@epa.gov]
CC: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Steller, John [Steller.John@epa.gov]
Subject: RE: forest biomass TSD

No questions from me Sara. Thanks for the update!!

From: Ohrel, Sara <Ohrel.Sara@epa.gov>
Sent: Tuesday, February 18, 2020 7:37 AM
To: Gunning, Paul <Gunning.Paul@epa.gov>
Cc: Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Steller, John <Steller.John@epa.gov>
Subject: forest biomass TSD

Good morning Paul,

This morning I sent you a link to the draft forest biomass literature technical support document we have been working on with RTI. The workgroup, Allen and Bill received access last Monday and we have been working to address the comments received so far.

Ex. 5 Deliberative Process (DP)

Please let us know if you have questions, comments or further guidance.

Thank you,
Sara and John.

Sara Bushey Ohrel
Climate Change Division
U.S. Environmental Protection Agency
(202) 343-9712
ohrel.sara@epa.gov

***deliberative

From: Ohrel, Sara [Ohrel.Sara@epa.gov]
Sent: 2/7/2020 7:45:58 PM
To: Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
CC: Steller, John [Steller.John@epa.gov]
Subject: RE: Biogenic CO2 Economic Analysis

Ex. 5 Deliberative Process (DP)

From: Irving, Bill <Irving.Bill@epa.gov>
Sent: Friday, February 07, 2020 2:33 PM
To: Ohrel, Sara <Ohrel.Sara@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>
Cc: Steller, John <Steller.John@epa.gov>
Subject: RE: Biogenic CO2 Economic Analysis

Ex. 5 Deliberative Process (DP)

From: Ohrel, Sara <Ohrel.Sara@epa.gov>
Sent: Thursday, February 06, 2020 11:07 AM
To: Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>
Cc: Steller, John <Steller.John@epa.gov>
Subject: RE: Biogenic CO2 Economic Analysis

Hi Allen and Bill,

Attached is the draft PSD forest biomass proposal's Economic Impact assessment with comments from us, OGC and Sarah Baker (whose comments also include those from Vera/Cheryl).

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Happy to discuss if needed,
Sara and John

Sara Bushey Ohrel
Climate Change Division
U.S. Environmental Protection Agency
(202) 343-9712
ohrel.sara@epa.gov

***deliberative

From: Ohrel, Sara
Sent: Tuesday, February 04, 2020 3:33 PM
To: Bill Irving <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>
Cc: Steller, John <Steller.John@epa.gov>
Subject: FW: Biogenic CO2 Economic Analysis
Importance: High

Hi Allen and Bill,

Just FYI – we received this analysis from the OAQPS team yesterday.

Ex. 5 AC/AWP/DP

We will share our marked up version with you tomorrow.

Thanks,
Sara and John

From: Baker, Sarah <baker.sarah@epa.gov>
Sent: Monday, February 03, 2020 11:43 AM
To: Steller, John <Steller.John@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>; Greenglass, Nora <Greenglass.Nora@epa.gov>; Doster, Brian <Doster.Brian@epa.gov>; Krallman, John <krallman.john@epa.gov>; Shepherd, Lorinda <Shepherd.Lorinda@epa.gov>; Johnson, Terry <Johnson.Terry@epa.gov>; Toups, Brad <Toups.Brad@epa.gov>; Elman, Barry <Elman.Barry@epa.gov>; Svendsgaard, Dave <Svendsgaard.Dave@epa.gov>
Cc: Petesch, Theresa (Tess) <petesch.theresa@epa.gov>; Sorrels, Larry <Sorrels.Larry@epa.gov>; Vetter, Cheryl <Vetter.Cheryl@epa.gov>

Subject: Biogenic CO2 Economic Analysis

Importance: High

All-

Attached is the economic analysis that Tess completed. Please take a look and if you have any feedback, please let me know by **COB Wednesday**. If you have any questions or concerns, feel free to contact me. Thank you!

Sarah

Message

From: Steller, John [Steller.John@epa.gov]
Sent: 3/15/2018 10:29:19 PM
To: Gunning, Paul [Gunning.Paul@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Ohrel, Sara [Ohrel.Sara@epa.gov]; Sherry, Christopher [Sherry.Chris@epa.gov]
Subject: Draft biomass policy document (3/15/18)
Attachments: policy memo draft 3 15 18.docx

Paul,

Please find the attached draft biomass policy statement document. This document reflects updates based on review and comments from Bill and Allen on an earlier version. We have left a few of the comments in the attached version to show the comment and our changes to address, which may still need some tweaking of the language. Please let us know if you have any questions.

Thanks,
John

John Steller
Geologist
U.S. Environmental Protection Agency
Climate Change Division
Steller.John@epa.gov
202-343-9319

Appointment

From: Garner, Dorothy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=345B45A381D24383BD4EFE54BA2565F6-GARNER, DOROTHY]
Sent: 4/8/2020 5:21:29 PM
To: Grundler, Christopher [grundler.christopher@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Ohrel, Sara [Ohrel.Sara@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]; Baker, Sarah [baker.sarah@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Steller, John [Steller.John@epa.gov]
CC: Doster, Brian [Doster.Brian@epa.gov]; Greenglass, Nora [Greenglass.Nora@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]
Subject: PSD Biogenic CO2 Proposed Rule Discussion
Location: Skype Meeting
Start: 4/15/2020 7:30:00 PM
End: 4/15/2020 8:15:00 PM
Show Time As: Busy

Significant Interagency Comment Summary for the
Proposed Biogenic CO₂ PSD Rule
Anne Idsal Briefing
April 20, 2020

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Join Microsoft Teams Meeting

Ex. 6 Personal Privacy (PP) United States, Washington DC (Toll)

Conference ID: Ex. 6 Personal Privacy (PP)

[Local numbers](#) | [Reset PIN](#) | [Learn more about Teams](#) | [Meeting options](#)

Message

From: Moran, Robin [moran.robin@epa.gov]
Sent: 6/20/2019 8:15:04 PM
To: Grundler, Christopher [grundler.christopher@epa.gov]; Charmley, William [charmley.william@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Hengst, Benjamin [Hengst.Benjamin@epa.gov]
Subject: Material for Monday's Biomass Briefing w/AA Wehrum
Attachments: Final Wehrum June Briefing Document.docx

OAQPS forwarded the material they plan to use for Monday's 1pm biomass briefing w/AA Wehrum.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Robin

From: Baker, Sarah
Sent: Thursday, June 20, 2019 1:55 PM
To: Moran, Robin <moran.robin@epa.gov>
Subject: RE: Biomass Briefing Discussion

Hi Robin. I've attached the final briefing document. Just let me know if you want to discuss or need additional information on anything. Thanks!

Sarah

Message

From: Kocchi, Suzanne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BD05A97675954EA084BF5EED8B54EE2F-SKOCCHI]
Sent: 6/20/2019 1:45:38 PM
To: Irving, Bill [Irving.Bill@epa.gov]
Subject: Re: Biogenic CO2 Wehrum briefing document

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Sent from my iPhone

On Jun 20, 2019, at 9:43 AM, Irving, Bill <Irving.Bill@epa.gov> wrote:

Ex. 5 Deliberative Process (DP)

From: Steller, John
Sent: Wednesday, June 19, 2019 4:08 PM
To: Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>
Subject: FW: Biogenic CO2 Wehrum briefing document

FYI

From: Greenglass, Nora
Sent: Wednesday, June 19, 2019 3:35 PM
To: Baker, Sarah <baker.sarah@epa.gov>; Steller, John <Steller.John@epa.gov>
Subject: Biogenic CO2 Wehrum briefing document

I've updated the appropriations provision analysis in the biogenic CO2 briefing document. Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Nora Greenglass
Office of General Counsel | Air & Radiation Law Office
U.S. Environmental Protection Agency
202-564-3095 (office)
202-603-6299 (cell)

Treatment of Biogenic CO₂
Emissions in PSD and title V
Programs

Overview of Presentation

- Appropriations Language
- EPA Policy Statement
- SAB Process
- Next Steps

Appropriations Language

- FY 2017, 2018, and 2019 Appropriations Acts directed DOE, USDA, and EPA to, consistent with their missions, jointly establish policies for the use of forest biomass energy as an energy solution, including policies that reflect the carbon neutrality of forest bioenergy and recognize biomass as a renewable energy source, provided the use of forest biomass for energy production does not cause conversion of forests to non-forest use.

EPA Policy Statement

- In April 2018, EPA issued a statement declaring the intent to treat biogenic CO₂ emissions resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral in forthcoming regulatory or other actions

SAB Process

- In March 2019, the EPA Science Advisory Board (SAB) completed its peer review of EPA's 2014 draft *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources* (SAB Report). The draft Framework presents qualitative considerations and a methodological framework for assessing the extent to which the production, processing, and use of biomass at stationary sources results in a net atmospheric contribution of biogenic CO₂ emissions.
- Final SAB Report finding: "there can be wide variation in the net effect of using biomass feedstocks in stationary facilities on emissions of carbon dioxide to the atmosphere and thus it is scientifically indefensible to assume all bioenergy has no net carbon dioxide emissions to the atmosphere, or the reverse, that all emissions represent a net addition to the atmosphere."

Next Steps

-
- **Ex. 5 Deliberative Process (DP)**
-

Message

From: Steller, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=8FE9486647F047CC8294BDC621C1ABD7-STELLER, JO]
Sent: 11/26/2019 9:07:29 PM
To: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: RE: Biomass lit review update

Hi Sara – An update before I am out of the office. We can touch based on Monday.

Ex. 5 Deliberative Process (DP)

From: Ohrel, Sara <Ohrel.Sara@epa.gov>
Sent: Monday, November 25, 2019 2:04 PM
To: Steller, John <Steller.John@epa.gov>
Subject: Re: Biomass lit review update

Awesome, thanks. I hope the CG meeting went well!

On Nov 25, 2019, at 10:57 AM, Steller, John <Steller.John@epa.gov> wrote:

Hi Sara,
Hope you're not working! – just sending you a quick update that I talked with RTI today and they have largely addressed the outstanding issues we discussed on last Thursday, finishing up today hopefully.

Ex. 5 Deliberative Process (DP)

Thanks and Happy Thanksgiving!
John

From: Petrusa, Jeffrey <jpetrusa@rti.org>
Sent: Monday, November 25, 2019 9:50 AM
To: Steller, John <Steller.John@epa.gov>; Ohrel, Sara <Ohrel.Sara@epa.gov>

Cc: Baker, Justin <justinbaker@rti.org>; Franzen, Kirsten <kfranzen@rti.org>; Taylor, Naomi <njtaylor@rti.org>; Bean, Alison <abean@rti.org>

Subject: RE: Biomass lit review update

John,

Thanks for your comment on the action items. Most of us are available anytime between 10:30 to 3:30pm today. Let me know what time would work best for you.

Jeff

From: Steller, John <Steller.John@epa.gov>

Sent: Monday, November 25, 2019 8:21 AM

To: Petrusa, Jeffrey <jpetrusa@rti.org>; Ohrel, Sara <ohrel.sara@epa.gov>

Cc: Baker, Justin <justinbaker@rti.org>; Franzen, Kirsten <kfranzen@rti.org>; Taylor, Naomi <njtaylor@rti.org>; Bean, Alison <abean@rti.org>

Subject: RE: Biomass lit review update

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Jeff,

Thanks for your email with the list below and your call on Friday. I think your list looks good/correct to me, I've made one comments below in red just as clarification. I am in the office today and tomorrow. Do you have time today for a quick call?

Thanks,
John

From: Petrusa, Jeffrey <jpetrusa@rti.org>

Sent: Friday, November 22, 2019 9:21 PM

To: Ohrel, Sara <Ohrel.Sara@epa.gov>; Steller, John <Steller.John@epa.gov>

Cc: Baker, Justin <justinbaker@rti.org>; Franzen, Kirsten <kfranzen@rti.org>; Taylor, Naomi <njtaylor@rti.org>; Bean, Alison <abean@rti.org>

Subject: Biomass lit review update

Hi Sara and John,

Below is the list of action items the RTI team took away from our last check-in call. As of COB today we have address or started to address these items today. Please lets me know if there are other items you are expecting us to address before our next call scheduled for Monday, December 2nd.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

@Steller, John, perhaps we can talk by phone early next week to talk through expectations for what RTI needs to prepare for the Dec 2nd call.

Thanks,
Jeff

Jeffrey E. Petrusa, MBA

Senior Economist

Environmental, Technology, and Energy Economics

RTI International | Research Triangle Park, NC 27709

Phone: 919.316.3808 | Fax: 919.541.6683

<image001.png>

Message

From: Steller, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=8FE9486647F047CC8294BDC621C1ABD7-STELLER, JO]
Sent: 5/23/2019 8:27:53 PM
To: Ohrel, Sara [Ohrel.Sara@epa.gov]
Subject: ACE interagency comment summary - biomass

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

USDA BSER biomass comments:

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

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-

Ex. 5 Deliberative Process (DP)

Path forward:

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,

John and Sara